



Music & Lifetime Memories

An Interdisciplinary Conference

Programme & Abstracts

1-2 November 2019

Durham University, Lindisfarne Centre

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Welcome

On behalf of the Organising Committee, we welcome you to Durham University for this exciting and interdisciplinary conference. The programme covers a wealth of perspectives on the topic of music and lifetime memories, from psychological studies of factors that influence music-evoked autobiographical memories to investigations of the impact of autobiographical events on musical composers' and performers' creative outputs and explorations of the therapeutic potential of music for people with dementia.

A special thanks goes to our four keynote speakers (Alexandra Lamont, Andrea Halpern, Catherine Loveday, and Lia Kvavilashvili), who will deliver Featured Lectures that draw together a wealth of fundamental research around which the themes of this event will centre. In addition, we thank the 18 presenters from across the globe who will deliver talks on a wide range of topics from diverse disciplinary backgrounds including musicology, psychology, computing, health sciences, and anthropology. We also gratefully acknowledge the Session Chairs and Durham University Music & Science Lab members for their invaluable assistance in helping this event to run smoothly and effectively. Finally, this event would not have been possible without funding from the Leverhulme Trust, Durham University Laidlaw Scholarship Programme, and travel grants from the Society for Education, Music and Psychology Research (SEMPRE).

Finally, we invite any delegates conducting relevant research to consider submitting an article to a forthcoming Special Collection in the journal *Music & Science* entitled 'Music and Autobiographical Memory'. The collection will be co-edited by Dr Kelly Jakubowski and Dr Amy Belfi, and the submission deadline is 31 December 2019. Full details are available at journals.sagepub.com/home/mns.

We look forward to hosting you in Durham over the next two days.

The Organising Committee

Kelly Jakubowski, Chair
Liila Taruffi
Anita Ghosh

Music & Lifetime Memories: An Interdisciplinary Conference
Lindisfarne Centre, Durham University, Durham, UK

Friday, 1st November 2019

11:00-12:00: Registration & coffee

12:00-12:15: Welcome & overview (Kelly Jakubowski)

12:15-13:00:

Featured Lecture 1: Alexandra Lamont (Keele University, UK)

Influences on remembered music: Family, friends, and the media

(Session Chair: Kelly Jakubowski)

13:00-14:00: Lunch

14:00-15:40: **Presentation session 1: Music-evoked memories across the lifespan** (Session Chair: Imre Lahdelma)

14:00: Engaging with music evokes more autobiographical memories than listening to music and background music with Brazilian elderly (**José Davison da Silva Júnior**, Federal University of Minas Gerais, Brazil)

14:20: Music, memory and life at senior age: A Portuguese case study based on the Orff-Schulwerk approach (**João Cunha**, University of Aveiro, Portugal)

14:40: The role of music in the life of residents in nursing homes (**Paolo Paolantonio**, SUPSI, Switzerland)

15:00: Music-evoked autobiographical memories in everyday life (**Kelly Jakubowski**, Durham University, UK)

15:20: The obstetric dilemma, transnatal memory, and the intrinsic link between music and memory (**Richard Parncutt**, University of Graz, Austria)

15:40-16:15: Coffee break

16:15-17:00:

Featured Lecture 2: Andrea Halpern (Bucknell University, USA)

Aspects of music that may last a lifetime... or not

(Session Chair: Tuomas Eerola)

17:00-18:00: **Presentation session 2: Autobiographical rememberings of composers and performers** (Session Chair: Samuel Horlor)

17:00: “Remembrances and Forebodings”: Traumatic memory in the life and works of Richard Wagner (**Tristan Harkcom**, The Open University, UK)

17:20: Black Illusions: An electroacoustic autobiography by Ákos Rózmán (**Gergely Loch**, Liszt Academy of Music, Hungary)

17:40: Musical instrument and biographical writing: The case of Yao Binyan and his legacy of Chinese seven-stringed zither qin (**Tsan-Huang Tsai**, Quanzhou Normal University, China)

Saturday, 2nd November 2019

9:00-10:20: **Presentation session 3: Music, memory, and emotions** (Session Chair: Scott Bannister)

9:00: Memory, emotional narrative and music: A game of experiential learning (**Aris Lanaridis**, Leeds Beckett University, UK)

9:20: Music imagery mediates the effect of music on autobiographic memory recall in depression (**Tushar Singh**, Banaras Hindu University, India)

9:40: Emotion regulation, rumination and the characteristics of music evoked autobiographical memory (**Yogesh Kumar Arya**, Banaras Hindu University, India)

10:00: Oh, Nostalgia: Childhood music as a trigger for MEAMs (**Susanne Kristen-Antonow**, LMU Munich, Germany)

10:20-11:05:

Featured Lecture 3: Catherine Loveday (University of Westminster, UK)

Music, memory and identity

(Session Chair: Tuomas Eerola)

11:05-11:30: Coffee break

11:30-12:30: **Presentation session 4: Music and lifetime memories in dementia** (Session Chair: Matthias Lichtenfeld)

11:30: Musical memory in people living with dementia (**Georgia A. Floridou**, University of Sheffield, UK)

11:50: The impact of music listening on the quality of life of people with dementia and their caregivers/family members (**Xiaoxiao Hou**, University of Liverpool, UK)

12:10: Banda Sonora Vital (Life Soundtrack Technology): Description and evaluation of a system to personalize music playlists for therapeutic purposes (**Felipe Luis Navarro**, Universitat Pompeu Fabra, Spain)

12:30-13:30: Lunch

13:30-14:30: **Presentation session 5: Musical features and collective remembering** (Session Chair: Liila Taruffi)

13:30: Recording records: Surface noise and nostalgia in popular music (**Joseph Coughlan-Allen**, University of Liverpool, UK)

13:50: Constructing Coltrane: Misremembering “Giant Steps” (**Daniel O’Meara**, Princeton University, USA)

14:10: The role of memory constraints in the popularity of Irish traditional melodies (**Sally Street**, Durham University, UK)

14:30-15:15:

Featured Lecture 4: Lia Kvavilashvili (University of Hertfordshire, UK)

Inducing autobiographical and semantic memories by music: Evidence from laboratory studies

(Session Chair: Kelly Jakubowski)

15:15-15:30: Coffee break

15:30-16:30: Group discussion (Session Chair: Kelly Jakubowski)

16:30: Close of conference

Featured Lecture 1

Influences on Remembered Music: Family, Friends, and the Media

Alexandra Lamont
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The field of autobiographical memory and music is a growing one and evidence is gathering for the power of music to evoke autobiographical memories, voluntarily or involuntarily, over short and long time-spans. I begin with a brief review of existing knowledge drawing on music-evoked autobiographical memories and the reminiscence bump which all converges to suggest that adolescence and early adulthood are a particularly formative period. How might this relate to the development of musical preferences, and in particular the phenomenon of open-earedness? I consider this by drawing on new data from young adults exploring personal and collective musical memories which, through a novel combination of experimental, survey and qualitative methods, allows insights into not only what is remembered and from when, but also why: what are the major influences on autobiographical memories of music?

Featured Lecture 2

Aspects of Music That May Last a Lifetime... or Not

Andrea Halpern
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As a memory researcher, I have been struck by the paradox that getting people to remember new music is challenging but music already in long-term memory seems very robust. In this talk I present several aspects of music that seem to endure through life without specific learning or training, such as absolute tempo and pitch of familiar music. Access to familiar music seems robust even in the face of declining ability to learn new information, such as in early stage dementia, as is aesthetic preference. However, we also need to be careful about concluding that music is unique in its persistence in memory, as evidenced by a cautionary tale involving autobiographical memories involving music and other domains.

Featured Lecture 3

Music, Memory and Identity

Catherine Loveday
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Autobiographical memory plays a profound part in our sense of self, the way we view our future and the relationships we have with others. Music has been shown to provide a powerful way of accessing these memories and is inherently tied up with our personal and cultural narrative. In this talk I will describe a series of studies we have carried out to investigate how musical memories are distributed across the lifespan, both in healthy older people and in those with memory impairments. In particular, I will focus on the types of memories that are associated with preferred music and the importance of personal choice. I will briefly compare music with reminiscence evoked by alternative stimuli, e.g. photographs and objects, and will argue that music plays a vital and potentially unique role in supporting our personal and cultural identity.

Featured Lecture 4

Inducing Autobiographical and Semantic Memories by Music: Evidence from Laboratory Studies

Lia Kvavilashvili
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In this talk, I will examine the relationship between music and two types of involuntary memories, autobiographical and semantic. Involuntary autobiographical memories are memories of past personal events that come to mind unexpectedly in the course of daily life, often in response to incidental cues (e.g., visual stimuli, smell, music, etc.). Involuntary semantic memories or mind-pops refer to experiences in which only isolated fragments of general knowledge (e.g., words, names, images or music) pop into mind without any additional personal information. Musical mind-pops (in the form of melodies or songs) have attracted considerable attention, probably because they get stuck in mind easily and may be sometimes difficult to get rid of. I will describe laboratory experiments, which demonstrate the importance of musical cues in inducing involuntary autobiographical memories and musical mind-pops under controlled conditions.

Engaging with Music Evokes More Autobiographical Memories than Listening to Music and Background Music with Brazilian Elderly

José Davison da Silva Júnior

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Autobiographical memories can be evoked by several sensorial clues, among which the music stands out for generating more emotional responses (Belfi, Karlan & Tranel, 2015). Elderly prefer and have strong emotional responses to the popular music of their youth compared to popular music from later periods (Schulkind, Hennis & Rubin, 1999). In order to investigate if the form of involvement with music could influence the content of autobiographical memories a multiple baseline design experimental study was planned, in which two groups of 65 to 85 years old subjects realized evocation tasks of autobiographical memories, with support of Brazilian popular songs that referred to the years of their youth (15-25 years). The 20 subjects were involved in three experimental conditions: listening to a popular music, engaging with popular music (listening to a popular music, sing a popular music and play a tambourine) and background popular music. The main measure was Autobiographical Interview (Levine *et al*, 2002). We also used Questionnaire for socioeconomic characterization of the elderly, Mini Mental State Examination, Geriatric Depression Scale and Positive and Negative Scale. Group 1 involved the participants in listening to a popular music, background popular music and engaging with popular music. Group 2 involved the participants in listening to popular music, engaging with popular music and background popular music. The purpose of this manipulation of the experimental variable was to control the effect of the order. The content of the autobiographical interview was analyzed based on Levine *et al* (2002) protocol, but only using the general probe. For the statistical comparisons, the Kolmogorov-Smirnov, Mann-Whitney and Friedman and Chi-Square Tests were applied. The results showed that after the condition engaging with popular music there was a higher frequency of autobiographical memories when compared to listening to popular music and background popular music. The findings are relevant to the conference by indicating that engaging with popular music, such as playing a percussion instrument and singing, evokes more autobiographical memories than just listening to popular music.

Music, Memory and Life at Senior Age: A Portuguese Case Study Based on the *Orff-Schulwerk* Approach

João Cunha

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Portugal is the country with the highest number of active Senior Universities (SU). This work shares emotions (and their relevance in lifetime memories) experienced at the *Orff-Schulwerk* approach 'Music, Movement and Dance' weekly classes from a SU of Northern Portugal.

The study evaluated senior students (n=45) with ages comprised between 59-82 years old, during one semester (2017/2018). Based on traditional repertoire exploration, the *Orff-Schulwerk* (OS) classes involves active music making, singing, body (and *Orff Instrumentarium*) percussion, movement and dancing, in the search for a holistic development. With theoretical support on *Flow Theory* (Csikszentmihalyi work), the collection and data analysis occurred based on the adaptation of *AFIMA - Adapted Flow Indicators in Musical Activities* (Custodero work).

The results indicate that senior students felt absolutely involved, once they lived high degrees of positive emotions of *AFIMA* (Happy; Cheerful; Excited; Involved; Alert; Satisfied; Successful). Therefore, according to their own testimony, all the experienced emotions seem to have relevant impact in their memories and personal/social lives.

From a critical perspective, it is interesting to discuss this get together of senior citizens, connect by music and movement. These rare moments enable to link to lifetime memories and almost lost traditions (most surviving by oral tradition, otherwise compromised), a recognition of times and places, developing/recognizing identities and maintaining alive (and recovering) memories. Most of the "musics" and "dances" used during the classes, also contribute collective memory and stimulate the participants to be more involve with the community on the transmission of a "treasure" (their cultural values). It is remarkable that the seniors became more interested in "coming out", actively participating in music and dance public presentations.

The Role of Music in the Life of Residents in Nursing Homes

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Notwithstanding the significant number of contributions devoted to the effects of music on older adults, to date the literature offers few contributions focusing specifically on residents in nursing homes. Consequently, the role of music in the lives of these people is not well understood. Developing a deeper understanding here is crucial if we consider the widespread increase of life expectancy and the consequent need to maintain high levels of wellbeing among nursing home residents. The aim of this qualitative study was to describe how and what extent older adults who live in nursing homes have access to music in their daily lives and what functions music plays in their life course. The study involved 20 residents (13 women, 7 men, mean age 84.6, SD \pm 7.3 years) in six nursing homes in Southern Switzerland, recruited by the staff of each nursing home, who briefly introduced them to the aims of the study. Data were collected through semi-structured interviews and analysed using thematic analysis. Results suggest that music is strongly linked with the identity of residents and can be helpful in experiencing positive emotions. Furthermore, it emerged that musical activities offered by the nursing homes can facilitate residents' social relationships. It became clear that, for many residents, access to music decreased after moving into a nursing home and that many of them would appreciate access to new and unfamiliar repertoires. Considering in detail the links between music and identity, the results of this study are relevant to better understand the relationships between music and autobiographical memories, as it emerged that music can trigger memories of residents and help to maintain continuity with their own past, despite age-related impairments and regardless of individuals' musical background.

Music-Evoked Autobiographical Memories in Everyday Life

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Anita Ghosh

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Music can be a particularly effective cue for bringing one back to the sights and sounds of events from across the lifespan. These music-evoked autobiographical memories (MEAMs) have previously been studied within laboratory experiments and clinical settings, often using experimenter-selected pop music to cue memories. Although such approaches allow for a high degree of experimental control, it is unclear whether the limits imposed by the artificial context and type of music used in such studies might also constraint the range of MEAMs that are experienced. The present work took a more naturalistic approach, by studying situational aspects, contents, and features of naturally-occurring MEAMs. In a first study using a survey approach, we compared reports of everyday MEAMs from a representative sample of 800 UK participants to autobiographical memories evoked by watching TV. In comparison to TV-cued memories, MEAMs were rated as more vivid, of greater life significance, and accompanied by greater reliving and stronger emotional responses (in particular, positive emotions such as happiness and love). This was despite the fact that MEAMs and TV-cued memories did not differ significantly in terms of self-reported recency of recall or age of the memory. In a second study, we collected reports of MEAMs as they occurred in daily life. 31 participants kept a diary of their MEAMs and music listening habits for one week. MEAMs were experienced about once per day, often during routine tasks such as travelling and housework. Everyday MEAMs were typically rated as highly vivid and involuntary, and were often accompanied by positive/mixed emotions (e.g., happiness, nostalgia) and social themes. The features reported within everyday MEAMs replicated several previous findings on autobiographical memories more generally, indicating that this naturalistic method was able to capture genuine memory experiences. Implications for future research on naturally-occurring MEAMs will be discussed.

The Obstetric Dilemma, Transnatal Memory, and the Intrinsic Link between Music and Memory

Richard Parncutt

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For the past few million years, prehumans faced an “obstetric dilemma”. The birth process became more difficult due to both increasing brain size and bipedal locomotion. Infants were more likely to survive if born earlier--uniquely helpless, and unable to cling or crawl. Communication with carers became critical for infant survival. Humans were unique in this respect. Across species, the infant schema (cuteness) brings together diverse perceptual inputs about an infant from the adult perspective. Conversely, an infant’s *mother schema* (MS) brings together perceptual inputs about the mother from the infant perspective. Evolutionary arguments combined with empirical data on prenatal perception and transnatal memory suggest that prenatal MS is extremely precocious in humans. The obstetric dilemma is consistent with the extraordinary neuroplasticity of the human fetus/infant including its ability to process complex auditory patterns (prosodic patterns, vocabulary, linguistic structures). That in turn can contribute to explaining the large cognitive and behavioral differences between humans and non-human primates. Including the emergence of music, religion, and consciousness. One problem to which MS theory offers a new solution is the definition of “music”. We may regard sound as “music” if it activates our MS, evoking the corresponding emotions—those which we imagine a fetus/infant “experiencing” in connection with its mother (e.g., devotion or transcendence). The MS includes the mother from both the prenatal/internal perspective (mainly sound and movement patterns) and the postnatal/external perspective (in all senses); the transformation at birth is an example of Piagetian accommodation. The theory predicts that music is intrinsically and profoundly linked to memory; indeed, transnatal memory may be the most existentially crucial memory in the lifespan. Every time we hear “music”, our attentional focus becomes oriented toward autobiographical events. From this perspective, I will consider the link between music and lifetime memories, personal identity, self-concept, non-musical memories, collective memory, and cultural transmission.

“Remembrances and Forebodings”: Traumatic Memory in the Life and Works of Richard Wagner

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In 1849, Richard Wagner participated in the May Uprising in Dresden, an insurrection characterized by close-quarters fighting, arson and violent reprisals perpetrated by troops against anyone suspected of being a revolutionary. Pursued by an arrest warrant that referred to his “substantial participation” in the uprising, Wagner fled Dresden and would not return for 13 years. Wagner’s experience of the revolution was without doubt traumatic, and this is clearly reflected in the nature of his recollections of the period, which present a vivid but confused account of events. In the wake of his escape, Wagner produced a series of theoretical essays that laid out his vision for an “artwork of the future”. Central to this new musico-dramatic art form was the role of memory, in particular the ability of music – which Wagner metaphorized as “the pure language of Feeling” – to recall earlier moments in the drama. Most famously, this forms the basis of the system of “leitmotifs” by which he composed his scores following the revolution, but Wagner’s revised conception of the interrelation between music and memory also led him to reconsider the construction of his earlier works. In this presentation, I will argue that Wagner’s conception of the mnemonic possibilities inherent in musical construction is directly imitative of his autobiographical encounter with traumatic memory as a result of his participation in the May Uprising. I will summarize the theoretical standpoint that Wagner outlined in his essays written in exile and explore the realization of these theories in his musical output following the revolution. In so doing, I hope to demonstrate that Wagner recreates the experience of traumatic memory in his music, both as a means to portray the reactions of characters to traumatic events and in order to effect an emotional response in his audience.

Black Illusions: An Electroacoustic Autobiography by Ákos Rózmán

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After composer and organist Ákos Rózmán (1939–2005) moved from his native Hungary to Sweden in 1971, it became his conviction that instrumental composition had no future, and he committed himself completely to the electroacoustic studio. Besides composing, he also worked as an organist at the Stockholm Catholic Cathedral for nineteen years. In my paper, I present *Black Illusions* (2003), Rózmán's only electroacoustic work admittedly created as a sounding autobiography. With reference to compositional drafts and the composer's correspondence, I show why and how he incorporated into the piece sound recordings that he had made more than two decades earlier in the Cathedral. In the composition, these recordings do not only stand for the events that they actually document: by their recontextualization, the composer turned them into symbols of a whole period of his life.

It was an unusually long and crooked path that led from the initial idea (1981) to the realization of the piece. I present the long evolution of the work's concept using a simple dynamic model of the relationship between human memory and the "memory" of the magnetic tape, the medium of Rózmán's basic materials. I show how the latter could both trigger and accommodate the ever-changing contents of the composer's mind. I conclude that the autobiographical nature of the finished composition is tightly connected with an equilibrium between just these two processes: trigger and accommodation.

Musical Instrument and Biographical Writing: The Case of Yao Binyan and His Legacy of Chinese Seven-stringed Zither *Qin*

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Musical instruments have often been studied through consideration of their history, construction and design, and more recently in relation to performance or social-cultural contexts. Beyond such conventional organological approaches, this paper aims to show that material objects such as musical instruments can also be used to assist interviews in field-based research, or in writings of the life stories of the owners with a special reference to their social relationships, an approach inspired by anthropologist Janet Hoskins' "biographical objects" (1998). Taking Shanghai-based *qin* player Yao Gongbai as an example for this paper, I will demonstrate how his collection of antique Chinese seven-stringed zither *qin*, passed down from his father, is entangled with his life stories. The stories of his instruments reflect the stories of Mr Yao himself, as well as his relationship with his father Yao Bingyan (1921–1983). This paper will show that the pathways of individual instruments can not only provoke stories that closely link with a person's biography, but also reflect more complex social relations between individuals and societies, and between the past and the present. This natural connection between human beings and their associated objects can be a useful perspective for scholars working with living individuals, as experience suggests that most people find it easier to talk about their material objects rather than themselves, and use important objects as reference points to recall their long-distance memories. This approach would be useful for both musicologists and ethnomusicologists dealing with musicians, composers, or music scholars in contemporary societies.

Memory, Emotional Narrative and Music: A Game of Experiential Learning

Aris Lanaridis

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How can the same music make one person sad and another person happy?

From infancy and onwards, moments of social and cultural interaction shape identity, contain emotional value and hold a strong potential to connect with music. Such emotionally charged moments of meaning-acquisition are evaluated by the brain and selectively stored in memory (Van den Tol & Ritchie, 2014). This store of lifetime memories, or in other words, our own personal experiences, is what we draw from when we want to assess and deal with a new situation, both rationally and emotionally.

The most important theories on identity, emotion and music look into evolutionary/cultural/social learning to explain their findings (Meyer, 1956; Tajfel, 1981; Tarrant, North & Hargreaves, 2002; Huron, 2006; Juslin & Västfjäll, 2008). All these theories have contributed volumes towards the nature of the interplay between emotional arousal and music. What is, however, still missing from all this in-depth exploration is a clearer understanding of the way this interplay conditions the emotional message a composer intends to communicate to their audience. Cultural and social learning happens through the interaction with other people and entails personal stories that can be seen as an important part of this learning (Schiff, 2012). This learning leaves a strong imprint in memory, rich in meaning and emotional value. Music has demonstrated notable power to recall such memories and their emotional manifestation (Van den Tol & Ritchie, 2014).

This presentation introduces a critical approach in an attempt to contribute valuable insight to the way music communicates emotion. It suggests that the relationship between music, emotion and narrative should be looked at and examined holistically and as part of our experiential learning that brain holds as lifetime memories (Lanaridis, 2017). In extension, emotional communication should be perceived as emotional sharing and should be sought into the overlap of the listeners' experiential learning.

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Music Imagery Mediates the Effect of Music on Autobiographic Memory Recall in Depression

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Music is often viewed as an important tool for recall of one's personal memory. Several studies have demonstrated that an individual's selection of music affects their mood and vice-versa. Depressed individuals have been shown to have memory-related impairments, such as negative bias and overgeneral autobiographical memory. They choose sad music that results in the ruminative recollection of their past which further leads to the maintenance of their depression. Though there are studies to report that music-based therapies might be helpful in treating depression, there exists a lack of studies trying to understand the underline mechanism between the relationship of music and depression. The present study was carried out to investigate the nature of autobiographic recall in normal as well as depressed individuals and to understand the role music imagery plays in this relationship.

Following a screening using the Beck depression inventory, The Autobiographical Memory Test and Test of Visual Imagery Control (TVIC), forty individuals (20 depressed and 20 non-depressed controls) were selected for this study. Half of the participants in each group were randomly divided into imagery and non-imagery groups. Participants in the imagery group were given a brief training about mental visualization and were instructed to form images while listening to music. The non-imagery participants were simply instructed to note down their thoughts during music listening. After the music listening exercise, they were presented with 10 cue words one by one for 30 seconds and were asked to describe their memory, if any, related to the cue word and also to rate their memory specificity, affect valence on five-point rating scales.

Results indicate that compared to non-depressed controls, depressed participants recalled more negative autobiographical memories following music and rated more negative affective valence. However, interesting interaction between groups and music imagery is evident in this relationship. Depressed participants with imagery instructions recalled less negative images than those without imagery instructions. No such differences were seen for non-depressed groups. Also, the affect valence ratings were less negative for imagery instruction participants in both groups.

The results of this study are of extreme importance and indicate that, though depressed people recall negative memories during listening to music, the formation of images related to listened music might be an effective strategy for treating depression.

Emotion Regulation, Rumination and the Characteristics of Music Evoked Autobiographical Memory

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Music has profound effect on autobiographical memory recall. While some studies show that music facilitates the recall of congruent materials for one's personal past, other indicate the tendency to recall incongruent autobiographical memory particularly during the negative mood state which is explained in terms of mood repair hypothesis. Further, findings from some other studies also indicate that recalled autobiographical memories differ with regard to their specificity or overgenerality which are claimed to be the indicator of depressive tendency. However, the mechanism that determines the characteristics of recalled autobiographical memory is little understood.

The present study examined the impact of the use of emotion regulation strategies on the ruminative tendency and the nature of music evoked autobiographical memory recall. On the basis of response on Emotion Regulation Questionnaire sixty participants were selected for this study among which 30 tend to use cognitive reappraisal and 30 tend to use emotion suppression as emotion regulation strategy. Half of the participants from each group listened to happy music and the other half from each group listened to sad music. All the participants then recalled their autobiographical memory evoked by the music and responded on a Rumination Response Scale. The participants were also administered PANAS before and after the music presentation as a manipulation check. The recalled autobiographical memories were then rated for memory specificity, overgenerality and valence on 5-point rating scales by three independent judges.

The findings revealed that the music influenced affective state in congruent direction. It indicated that emotion suppression group tend to recall more overgeneral and congruent memory and cognitive reappraisal group tend to recall more specific and incongruent memory in sad music condition. However, this difference was not observed in positive music condition. These two groups also differed in their ruminating tendencies.

These results are particularly important as they confirm the role of emotion regulation strategies and affective states on the characteristics of autobiographic recall. These results might be helpful in explaining the mechanisms of cognitive affective disturbances and in developing effective interventions for such disturbances.

Oh, Nostalgia: Childhood Music as a Trigger for MEAMs

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A wealth of research has shown that there is a so-called “reminiscence bump” for MEAMs (music-evoked autobiographical memories) from youth (e.g. Conway, 2005). Recent research indicates that popular music from early childhood mainly creates MEAMs from early youth (Kristen-Antonow, 2018). However, while widely used in research on MEAMs popular music might not be ideal to elicit childhood memories because children don’t really follow the charts until early youth. However, children do watch TV. Thus, this study examined children’s music from TV series as a trigger for childhood MEAMs with an emotional impact.

Seventy-seven (45 females) participants were tested with a stimulus-specific design. Subjects were presented with 11 theme songs from popular childhood TV series and were told to write down any MEAMs coming to mind. Subsequently, MEAMs were coded for type (semantic or episodic), valence, frequency and specificity. Further, general affect and music-specific state emotions were assessed.

Results revealed that MEAMs dated back to when participants were $M = 7.73$ years of age ($SD = 3.32$ years). Participants produced significantly more negative memories than positive memories and as many semantic as episodic ones. However, only episodic memories were related to emotional states. Positive music-related emotions after the experiment were predicted by the specificity of MEAMs, even when controlling for general affect. The specificity, but not frequency of MEAMs created feelings of nostalgia in participants. A rather surprising finding was that participants who had encoded the memories only as music and not as a combination of both music and imagery from the TV series reported not more, but more specific MEAMs. The results are discussed in terms of childhood MEAMs as a useful trigger for music-specific state emotions and general affect in therapeutic settings.

Musical Memory in People Living with Dementia

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Music and memory are intertwined – hearing a song facilitates the retrieval of autobiographical memories and the musical memory of that song can last forever in our mental jukebox. People living with dementia are known to experience a decline in voluntary autobiographical memory, whilst their voluntary musical and semantic memory are relatively unchanged. However, there is no research on how everyday involuntary musical memory, which is automatic in retrieval and semantic in nature, is experienced in this group. The main aim of the current study is to investigate the frequency of involuntary musical memories as compared to their voluntary counterparts, in people living with dementia, and how these findings compare to autobiographical memories. People living with dementia are expected to experience involuntary as compared to voluntary musical memories more frequently and also to experience both more often than autobiographical memories. Furthermore it is predicted that both memory forms will be experienced less in people living with dementia as compared to healthy controls. The study is ongoing and it is aimed that a total of 30 people living with dementia and 30 matched healthy controls will participate in it, expected to finish in the end of August. Individuals are invited in the lab and are asked questions about the frequency of everyday involuntary and voluntary musical and autobiographical memories. The results will provide insights into the memory systems associated with music and autobiographical events in healthy and pathological ageing and will have implications for the increasing popular music-based care currently being offered to people living with dementia.

The Role of Music Listening in Eliciting Autobiographical Memories and Improving the Quality of Life of People with Dementia and their Caregivers

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Dementia is one of the most pressing of health-problems faced around the globe today. It is characterised by the devastating progressive degeneration of the brain, having a profound effect upon routine daily activities - in turn leading to a significant lessening of one's individual independence. As a condition dementia brings with it a great deal of grief, stress and suffering both for the people living with it as well as those surrounding them - family members and/or care-givers - during the years of living with its effects (up to 12 years). This is mainly due to the fact that dementia often brings with it psychological and behavioural problems that decrease relationships and general Quality of Life (QoL). Current medications are not only costly but often have limited efficaciousness with respect to the treatment of the disease's symptoms. Thus, non-pharmacological interventions are currently being explored as alternative (or supplementary) strategies in the treatment in dementia. Lifetime memories - those that are so important to the creation and development of one's self-identity, self-knowledge and everyday life meaning - are often impaired even from the early stages of dementia. This loss of lifetime memories often leads to fear, social isolation, loneliness along with the hallucinations that develop as the disease progresses. This paper, written from the standpoint of a systematic review, sets out to describe the notion of individual meaningful music listening (drawing upon the theories outlined in the documentary *Alive Inside*) and outline its significant potential for the future treatment of people with dementia (PWD). It will suggest that by placing significant emphasis upon individual meaningful music listening - the music linked to one's life story - autobiographical memories that are linked to one's life story are evoked thus assisting PWD the ability to recall life experiences and be able to regenerate a sense of individual empowerment.

Banda Sonora Vital (Life Soundtrack Technology): Description and Evaluation of a System to Personalize Music Playlists for Therapeutic Purposes

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Banda Sonora Vital is a web-based service that creates personalized playlists for music therapy sessions (<http://bandasonoravital.upf.edu>). Using a musical anamnesis form we elicit relevant information about the life of the patient, which includes biographical information, musical education, preferences (e.g. favorite artists, songs, genres, mood, instrument) and memories associated to music. From this data, our music recommendation algorithm combines direct search (for specific songs and most popular songs of particular artists), search by similarity, and indirect search based on most popular songs and similarities between users. The algorithm outputs a list of songs or music pieces that are potentially relevant to the patient, which are later evaluated and linked to personal memories. In this way, we create playlists which can trigger these memories related to music. The system was evaluated with healthy senior users and Alzheimer patients in the context of an inter-generational pilot study. The evaluation showed the advantage of personalization, provided positive feedback on most of the implemented features, and yielded suggestions to improve the system for its use in a therapeutic context. This evaluation also allowed us to build a collection of popular songs related to the life of seniors in Barcelona, attempting to redress the inherent bias of musical recommendation systems towards young and English-speaking users. We are currently adapting our system to include other languages and country-specific music to enhance the usage of the website within the scope of the TROMPA project, which uses citizen science and a human-in-the-loop approach to improve the quality of annotations of musical content.

Recording Records: Surface Noise and Nostalgia in Popular Music

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Surface noise: a term for the crackle and hiss that occurs during the playback of records. The sound has been a consistent presence in recorded music listening, since the invention of the phonograph. Consequently, as with the music it has accompanied over the years, surface noise is often associated with lifetime memories. Although the sound is conventionally thought of as detrimental to the enjoyment of recorded music, an opposing opinion has gradually emerged, regarding surface noise as meaningful. It has become increasingly common for the sound to feature *in* recordings, rather than occur due to their playback, being deliberately included to achieve a particular effect.

This paper will discuss selected records (from The Beatles to Beck) that purposely feature surface noise in reference to lifetime memories, and have been described as such by the recording artists. It will consider how surface noise has been used in these instances to share past listening experiences, and evoke feelings of nostalgia. It will go on to contemplate how the sound is portrayed in such instances, and what circumstances allow the sound to be associated with lifetime memories.

These questions will be addressed using inferences raised through a process of induction (involving the examination and comparison of previous research studies, archival documents, and audio recordings). Furthermore, these inferences will be considered via the application of conceptual metaphor theory, auditory scene analysis, and the concepts of restorative and reflective nostalgia.

Constructing Coltrane: Misremembering “Giant Steps”

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Among jazz listeners and musicians, the ability to recognize familiar improvisers’ styles is a central aspect of the listening experience. In arenas like the long-running “Blindfold Test” column in *Down Beat* magazine, listeners encounter unfamiliar records and attempt to identify who is playing based on their memories of different jazz players’ styles. Even beyond the confines of the blindfold test, jazz listeners’ *lingua franca* is a vocabulary built from style and memory: the guitarist has “got a little Grant Green in there” or the pianist is “playing it kind of Monkish.”

But while this ability to internalize jazz players stylistic languages often relies on personal memories (hearing a particular recording, say, or seeing a player live), it also is constructed collectively through dialogues among a community of listeners and musicians. This wider, intertextual listening context impacts how listeners’ memories form—and how they then transform over time. For an iconic solo like John Coltrane’s improvisation on “Giant Steps” (1960), listeners grapple with not only their own experiences of the recording, but a host of myths, commentaries, and analyses that shape how they interpret and remember Coltrane’s style.

Examining listener recollections of “Giant Steps,” I explore the concept of misremembering, in which listeners’ memories seem not to resemble Coltrane’s *actual* playing as much as they do a culturally constructed image of his style. With “Giant Steps” as a case study, I look at how shared meanings—like perceived stylistic influences or allusions—emerge out of a culture of jazz listening. Centrally, this culture is shaped by jazz pedagogy, which impacts not only the ways in which musicians improvise, but also how listeners construct memories of the music they hear.

The Role of Memory Constraints in the Popularity of Irish Traditional Melodies

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Despite radical changes in the consumption and production of traditional music in the digital age, the melodies played at Irish traditional music sessions are almost always still performed from memory. Such tunes, therefore, present an ideal case study for investigating the role of learning and memory biases in shaping musical diversity.

In particular, cognitive constraints may influence why some tunes enter into the ‘core’ session repertoire (e.g. The Kesh, Drowsy Maggie) while the vast majority languish in obscurity. Based upon insights from music psychology and the interdisciplinary field of cultural evolution, we should expect that highly popular tunes are of intermediate length and complexity, as they strike a balance between aesthetic appeal and ease of playing from memory.

The current project investigates this prediction using a large online collection ($N > 15,000$) of Irish traditional melodies (The Session website, thesession.org). As a preliminary measure of tune complexity, I use the number of non-repeating bars (i.e. a 32-bar tune with an AABB structure = 16 bars). Albeit crude, this measure captures the difficulty of performing a tune from memory to some extent – all else being equal, a 2-part, 16 bar tune should generally be easier to learn and play than a 4-part, 32 bar tune. As a measure of popularity, I use the number of times tunes have been added to the website users’ virtual ‘tunebooks’.

Intermediate length (particularly 16 bar) tunes are over-represented among tunes added to users’ tunebooks, while both shorter (8 bar) and longer (32+ bars) tunes are under-represented. By the time of the conference, I will have investigated whether these results hold when applying more sophisticated measures of melodic complexity and entropy.

By exploring relationships between memorability and popularity of folk tunes, this project will shed light on how broadly-shared memory biases may shape the cultural evolution of traditional music.

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